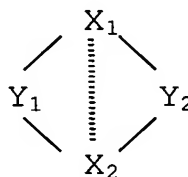


What is claimed is:

1. A composition for inhibiting the RNase H activity of a retrovirus reverse transcriptase comprising an inhibitory agent of Formula I:



Formula I

wherein,

X₁ and X₂ are antiparallel complementary oligonucleotide strands that associate to form a duplex;

X₁ is 2 to 24 nucleotides in length;

X₂ is 2 to 24 nucleotides in length;

Y₁ is 0 to 8 nucleotides in length;

Y₂ is 0 to 8 nucleotides in length;

at least one of Y₁ or Y₂ is 2 to 8 nucleotides in length; and

Y₁ and Y₂ each independently contain a ribonucleic acid; 2',5'-linked ribonucleic acid; or combination thereof wherein said ribonucleic acid comprises the sequence 5'-UUYG-3'/2' (SEQ ID NO:1).

2. A composition of claim 1, wherein X₁ and X₂ of Formula I are comprised of 3',5'-linked ribonucleic acid; deoxyribonucleic acid; 2',5'-linked ribonucleic acid; arabinonucleic acid; 2'-fluoro-arabinonucleic acid; locked nucleic acid; peptide nucleic acids; or a combination thereof

3. A composition of claim 1, wherein X₁ and X₂ of Formula I are comprised of 3',5'-linked ribonucleic acid.

4. A composition of claim 1, wherein X_1 and X_2 of Formula I are comprised of deoxyribonucleic acid.

5 5. A composition of claim 1, wherein X_1 and X_2 of Formula I are comprised of a combination of 3',5'-linked ribonucleic acid and deoxyribonucleic acid.

6. A composition of claim 1, wherein X_1 and X_2 of
10 Formula I are 3',5'-linked ribonucleic acid and are 4 to 10 nucleotides in length.

7. A composition of claim 1, wherein Y_1 and Y_2 are a
3',5'-linked tetranucleotide of the sequence 5'-UUYG-3'
15 (SEQ ID NO:1).

8. A composition of claim 1, wherein said composition is a cyclic structure.

20 9. A method for inhibiting the replication of a retrovirus comprising contacting a cell infected with a retrovirus with a composition of claim 1 which inhibits the RNase H activity of a retrovirus reverse transcriptase thereby inhibiting the replication of the
25 retrovirus in said cell.

10. A method for preventing or treating a retrovirus infection comprising administering to a subject having or at risk of having a retrovirus infection an effective
30 amount of a composition of claim 1 which inhibits the RNase H activity of the retrovirus reverse transcriptase so that the replication of the retrovirus is inhibited and

the retroid virus infection in said subject is prevented or treated.